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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,746

10/20/2003

Noriaki Ito

03500.017661.

9251

5514

7590

12/05/2008

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EXAMINER

DICKERSON, CHAD S

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

12/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/687,746	Applicant(s) ITO ET AL.	
	Examiner CHAD DICKERSON	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>see IDS filed 9/11/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/26/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-3, 5-11 and 13-18 have been considered but are moot in view of the new ground(s) of rejection. The Amendment to the claim necessitated the new ground(s) of rejection. However, the references of Ohtsuka and Niikawa '500 are still being applied. The Examiner would like to briefly respond to some of the Applicant's arguments on page 19.

In regards to Applicant's arguments, the system of Ohtsuka involves a camera inputting information into a computer, but the manner of inputting the information into the computer from the camera is not specified (see col. 7, ln 8-15 of Ohtsuka). However, the reference of Niikawa '500 discloses sending instructions to the connected computer to show the image on the camera's display in a real-time manner on the computer (col. 7, ln 42 – col. 8, ln 51 of Niikawa '500). With the combination with Niikawa, the feature of the camera and computer device communicating is performed.

Also, the Ohtsuka reference performs the feature of inputting print setting information into an operation panel of a camera. This information is displayed on the display unit of the camera (see Ohtsuka col. 6, ln 3-67). A user is presented with a menu of options to choose from and the user selects the desired options. Therefore, the feature of choosing options within a print setting screen is performed.

Regarding the feature of reading information from a storage medium, although the Ohtsuka reference might be silent regarding the reading of information from a detachable storage medium, this is performed in the reference of Niikawa '500 (see col. 6, ln 9-13). Lastly, the reference of Niikawa '618 is used to cure any deficiencies of the combination of Ohtsuka and Niikawa '500.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 15 is trying to gain patent protection to a seemingly patentable process. However, the actual method steps in the body of the claim are not tied to a specific apparatus, machine or structure on a machine that is performing the method steps. Applicant is suggested to mention in the body of the claim language the structure of the apparatus performing the method step.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 5-7, 9-11 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuka '526 (USP 6198526) in view of Niikawa (USP 7042500) and Niikawa '618 (USP 7161618).

Re claim 1: Ohtsuka '526 discloses a print system comprising an external apparatus, a host computer which communicates with said external operating apparatus, and a printer which communicates with said host computer,

wherein said external operating apparatus comprises

a display unit which displays a print setting screen (i.e. the digital camera used contains a monitor on the camera that displays setting value choices regarding print settings; see col. 6, lines 1-56);

an operation panel which receives a print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the above parameters on the digital camera, it is clear that an input is received on the

operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56),

a controller in accordance with said operation panel receiving the print setting instruction (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) so to cause it to reflect a print setting corresponding to the print setting instruction received by said operation panel in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each

time the value or setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), and

wherein said host computer comprises

a receiving unit which receives the image data (i.e. in the system both the personal computer (4) and the order receiving apparatus (1) can be considered as a host computer. The personal computer (4) is able to receive image data from the digital camera. The input from the digital camera relates to information that was stored as a predetermined value before the information was input into the personal computer (4); see fig. 1; col. 7, lines 1-66), and

a print control unit which generates print data corresponding to the print setting (i.e. the order information instructs the printer to generate print data corresponding to the order information (12) specified in the order file (10). Although a print control unit is not specified, the order receiving apparatus (1) is clearly the printer control unit since the instructions for the printer has to be recognized and processed by the order receiving apparatus (1) and the printer is controlled by the apparatus (1) in order to output the desired document of the user; see fig. 1; col. 7, lines 1-66, col. 8, lines 35-66, col. 9, lines 1, 2 and col. 10, lines 17-33), and

wherein said printer prints the print data output from said host computer (i.e. the image and order files (9 and 10) are both used to reflect what the user desires to have printed by the printer (2) and this information has been outputted by the order receiving apparatus (1). Since the personal computer (4) sends information to the order receiving apparatus to be printed, this is considered as the host computer that outputted print

data to the printer (2); see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

However, Ohtsuka '526 fails to teach wherein said external operating apparatus comprises: reading means for reading out image data from a detachable storage medium; a button operative to instruct said host computer to preview the image data read out by said reading means; transmitting means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated; a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer; wherein said host computer comprises: a receiving unit which receives the image data read out by said reading means and then transmitted by said transmission means from said storage medium; a display control unit which receives the interruption event generated by said controller from said external operating apparatus and effects a preview display in which the print setting is reflected in the image data received by said receiving unit.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses wherein said external operating apparatus comprises:

reading means for reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor). However, the card I/F (212) is used to read image

data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

a preview button operative to instruct said host computer to preview the image data read out by said reading means (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmission means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

wherein said host computer comprises:

a receiving unit which receives the image data read out by said reading means and then transmitted by said transmission means from said storage medium (i.e. in the system, the host computer is able to receive image data from the digital camera once

the camera reads image data from the memory card (8) and transmits this information to the computer through the communication I/F (213); see col. 6, ln 9-13);

a display control unit which receives the interruption event generated by said controller from said external operating apparatus (i.e. in the system, the camera can send an interruption event regarding the updating of the image in the camera. If the image in the camera is changed, this is reflected in the PC's monitor; see col. 7, ln 60-col. 8, ln 20) and effects a preview display in which a print setting is reflected in the image data received by said receiving unit (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images. Also, the system is able to reflect the update of the image that may have changed due to movement of the camera or a different image being taken with different scene information. This is shown in the camera and the updated screen in the computer; see fig. 12; col. 7, ln 42 - col. 9, line 41).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wherein said external operating apparatus comprises: reading means for reading out image data from a detachable storage medium, transmission means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated, wherein said host computer comprises: a receiving unit which receives the image data read out by said reading means and then transmitted by said transmission means from said storage medium, a display control unit which receives the

interruption event generated by said controller from said external operating apparatus and effects a preview display in which the print setting is reflected in the image data received by said receiving unit, incorporated in the device of Ohtsuka '526, in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to

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transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 2: The teachings of Ohtsuka '526 in view of Niikawa '500 and Niikawa '618 are disclosed above.

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Ohtsuka '526 discloses a system, wherein said controller generates the interruption event according to the print start instruction (i.e. when the user desires to instruct a print to the printer, the user uses the function on the digital camera to set order information (7) in regards to the necessity of printing and sends this information to the printer through the personal computer (4). When the function changes a print flag to 1, this generates a signal, analogous to an interruption event, to correspond to the print instruction in order to instruct the printer to start printing once the order information (7) is received by the order receiving apparatus (1) and then to the printer (2); see fig. 1; col.6, lines 1-66, col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

Re claim 3: The teachings of Ohtsuka '526 in view of Niikawa '500 and Niikawa '618 are disclosed above.

Ohtsuka '526 discloses a system, wherein in response to the reception of the interruption event corresponding to said print start instruction, said print control unit outputs to said printer the print data to which the print setting instructions received by a plurality of interruption events received so far are reflected to said printer (i.e. when the printer receives the instruction to print an image by the print necessity flag equaling 1, the printer also recognizes the print settings relating to the print data in the image information (11) in the image file (9). The plurality of print settings is a plurality of signals recognized by the digital camera each time a different print setting is entered in the system. This is also the case for the personal computer (4), if the personal

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computer is used as the external operating apparatus that can have different print settings entered into the system through the personal computer (4). The order receiving apparatus (1) outputs the print data that reflects the print settings received by the order file (10) from the personal computer (4) through transmission and are outputs this information to the printer (2); see fig. 1; col.6, lines 1-66, col. 7, lines 1-66, col. 8, lines 35-66, col. 9, lines 1, 2 and col. 10, lines 17-33).

Re claim 5: Ohtsuka '526 discloses an external operating apparatus connectable to a print system constructed by a host computer including at least a receiving unit which receives image data (i.e. in the system of Ohtsuka, both computers receive image data; see col. 7, ln 8-15 and col. 10, ln 22-28), a print control unit which generates print data corresponding to the print setting (i.e. in Ohtsuka, the order information (7) is used to generate an order file on a computer and the order file can be transmitted to the order receiving computer. The order information developed at the camera is considered as the print setting instructions; see col. 6, ln 3-64) and outputs the generated print data to a printer (i.e. the printer in the system is able to produce a print job reflecting the order information sent from the camera; see col. 8, ln 62 - col. 9, ln 2), and said printer, said apparatus comprising:

a display unit which displays a print setting screen (i.e. a monitor on the digital camera is used to show settings regarding the printing that the user can set; see col. 6, ln 3-64);

an operation panel which receives the print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56);

a controller in accordance with said operation panel receiving the print setting instruction (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) so to cause it to reflect a print setting corresponding to the print setting instruction received by said operation panel in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an

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interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56).

However, Ohtsuka '526 fails to teach a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit, reading means for reading out image data from a detachable storage medium; transmitting means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated; a preview button operative to instruct said host computer to preview the image data read out by said reading means; a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in

the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images; see fig. 12; col. 9, lines 12-41),

reading means for reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor). However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

a preview button operative to instruct said host computer to preview the image data read out by said reading means (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmitting means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a

manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of discloses a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit, reading means for reading out image data from a detachable storage medium, a preview button operative to instruct said host computer to preview the image, transmitting means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated, incorporated in the device of Ohtsuka '526, in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach a controller for generating the interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses a controller for generating the interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer (i.e. like the above

applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a controller for generating the interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is

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transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 6: The teachings of Ohtsuka '526 in view of Niikawa '500 and Niikawa '618 are disclosed above.

Ohtsuka '526 discloses an apparatus, further comprising an instructing unit which instructs a print start and wherein said controller generates the interruption event corresponding to the print start instruction (i.e. when the user desires to instruct a print to the printer, the user uses the function on the digital camera to set order information (7) in regards to the necessity of printing and sends this information to the printer through the personal computer (4). When the function changes a print flag to 1, this generates a signal, analogous to an interruption event, to correspond to the print instruction in order to instruct the printer to start printing once the order information (7) is received by the order receiving apparatus (1) and then to the printer (2); see fig. 1; col.6, lines 1-66, col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

Re claim 7: The teachings of Ohtsuka '526 in view of Niikawa '500 and Niikawa '618 are disclosed above.

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Ohtsuka '526 discloses an apparatus, wherein in response to the reception of the interruption event corresponding to the print start instruction, said print control unit outputs to said printer the print data to which the print settings received by a plurality of interruption events received so far are reflected (i.e. when the printer receives the instruction to print an image by the print necessity flag equaling 1, the printer also recognizes the print settings relating to the print data in the image information (11) in the image file (9). The plurality of print settings is a plurality of signals recognized by the digital camera each time a different print setting is entered in the system. This is also the case for the personal computer (4), if the personal computer is used as the external operating apparatus that can have different print settings entered into the system through the personal computer (4). The order receiving apparatus (1) outputs the print data that reflects the print settings received by the order file (10) from the personal computer (4) through transmission and outputs this information to the printer (2); see fig. 1; col.6, lines 1-66, col. 7, lines 1-66, col. 8, lines 35-66, col. 9, lines 1, 2 and col. 10, lines 17-33).

Re claim 9: Ohtsuka '526 discloses an information processing apparatus which can communicate with an external operating apparatus including a display unit which displays a print setting screen (i.e. the digital camera used contains a monitor on the camera that displays setting value choices regarding print settings; see col. 6, lines 1-56); an operation panel which receives a print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the

digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), a controller in accordance with said operation panel receiving the print setting instruction (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) so to cause it to reflect a print setting corresponding to the print setting instruction received by said operation panel in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of

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printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), and a printer, said apparatus comprising:

a receiving unit which receives the image data (i.e. in the system both the personal computer (4) and the order receiving apparatus (1) can be considered as a host computer. The personal computer (4) is able to receive image data from the digital camera. The input from the digital camera relates to information that was stored as a predetermined value before the information was input into the personal computer (4); see fig. 1; col. 7, lines 1-66), and

a print control unit which generates print data corresponding to the print setting (i.e. the order information instructs the printer to generate print data corresponding to the order information (12) specified in the order file (10). Although a print control unit is not specified, the order receiving apparatus (1) is clearly the printer control unit since the instructions for the printer has to be recognized and processed by the order receiving apparatus (1) and the printer is controlled by the apparatus (1) in order to output the desired document of the user; see fig. 1; col. 7, lines 1-66, col. 8, lines 35-66, col. 9, lines 1, 2 and col. 10, lines 17-33), and

and outputting the generated print data to said printer (i.e. the image and order files (9 and 10) are both used to reflect what the user desires to have printed by the

printer (2) and this information has been outputted by the order receiving apparatus (1). Since the personal computer (4) sends information to the order receiving apparatus to be printed, this is considered as the host computer that outputted print data to the printer (2); see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

However, Ohtsuka '526 fails to teach wherein said external operating apparatus including reading means for reading out image data from a detachable storage medium; a preview button operative to instruct said host computer to preview the image data read out by said reading means; transmitting means for transmitting the image data read out by said reading means, to said information processing apparatus in response to said preview button being operated; a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said information processing apparatus by said transmission means so that the generated interruption event is transmitted to said information processing apparatus; a receiving unit which receives transmitted from said external operating apparatus, a display control unit which effects a preview display in which the print setting is reflected in the image data received by said receiving unit.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses wherein said external operating apparatus including reading means for reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer

and the computer is connected to a printing device for printing (same field of endeavor). However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

a preview button operative to instruct said host computer to preview the image data read out by said reading means (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmission means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

a receiving unit which receives the interruption event transmitted from said external operating apparatus (i.e. in the system, the camera can send an interruption event regarding the update of the image in the camera. If the image in the camera is

changed, this is reflected in the PC's monitor and the update of the image sent to computer is considered an interruption event; see col. 7, ln 60-col. 8, ln 20) and

a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images. Also, the system is able to reflect the update of the image that may have changed due to movement of the camera or a different image being taken with different scene information. This is shown in the camera and the updated screen in the computer; see fig. 12; col. 7, ln 42 - col. 9, line 41).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wherein said external operating apparatus comprises: reading means for reading out image data from a detachable storage medium, transmission means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated, wherein said host computer comprises: a receiving unit which receives the image data read out by said reading means and then transmitted by said transmission means from said storage medium, a display control unit which receives the interruption event generated by said controller from said external operating apparatus and effects a preview display in which the print setting is reflected in the image data received by said receiving unit, incorporated in the device of Ohtsuka '526, in order to

have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for

executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 10: The teachings of Ohtsuka '526 in view of Niikawa '500 and Niikawa '618 are disclosed above.

Ohtsuka '526 discloses an apparatus, wherein said apparatus receives the interruption event corresponding to a print start instruction from said controller (i.e. when the user desires to instruct a print to the printer, the user uses the function on the digital camera

to set order information (7) in regards to the necessity of printing and inputs this information to the personal computer (4). When the function changes a print flag to 1, this generates a signal, analogous to an interruption event, to correspond to the print instruction in order to instruct the printer to start printing once the order information (7) is received by the order receiving apparatus (1) and then to the printer (2). The host computer (4) can be considered as an external operating apparatus that sends information to the ordering computer (1) that informs the ordering computer that the order file needs to be printed and once this information is read and sent to the printer, this order file starts the printing of the printing device; see fig. 1; col.6, lines 1-66, col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

Re claim 11: The teachings of Ohtsuka '526 in view of Niikawa '500 and Niikawa '618 are disclosed above.

Ohtsuka '526 discloses an apparatus, wherein in response to the reception of the interruption event corresponding to the print start instruction, said print control unit outputs to said printer the print data in which the print settings received by a plurality of interruption events received so far are reflected (i.e. when the printer receives the instruction to print an image by the print necessity flag equaling 1, the printer also recognizes the print settings relating to the print data in the image information (11) in the image file (9). The plurality of print settings is a plurality of signals recognized by the digital camera each time a different print setting is entered in the system. This is also the case for the personal computer (4), if the personal computer is used as the external

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operating apparatus that can have different print settings entered into the system through the personal computer (4). The order receiving apparatus (1) outputs the print data that reflects the print settings received by the order file (10) from the personal computer (4) through transmission and are outputs this information to the printer (2); see fig. 1; col.6, lines 1-66, col. 7, lines 1-66, col. 8, lines 35-66, col. 9, lines 1, 2 and col. 10, lines 17-33).

Re claim 13: Ohtsuka '526 discloses a method of controlling a print system comprising an external operating apparatus, a host computer which communicates with said external operating apparatus, and a printer which communicates with said host computer,

wherein said method includes a control method for said external operating apparatus, comprising the steps of:

displaying a print setting screen on a display unit (i.e. the digital camera used contains a monitor on the camera that displays setting value choices regarding print settings; see col. 6, lines 1-56);

receiving by an operation panel a print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the

above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56),

in accordance with the print setting instruction being received in said receiving step (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) so to cause it to reflect a print setting corresponding to the print setting instruction received in said receiving step in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or

setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), and

wherein said method further includes a control method for said host computer comprising the steps of:

receiving the image data (i.e. in the system both the personal computer (4) and the order receiving apparatus (1) can be considered as a host computer. The personal computer (4) is able to receive image data from the digital camera. The input from the digital camera relates to information that was stored as a predetermined value before the information was input into the personal computer (4); see fig. 1; col. 7, lines 1-66), and

generating print data corresponding to the print setting (i.e. the order information instructs the printer to generate print data corresponding to the order information (12) specified in the order file (10). Although a print control unit is not specified, the order receiving apparatus (1) is clearly the printer control unit since the instructions for the printer has to be recognized and processed by the order receiving apparatus (1) and the printer is controlled by the apparatus (1) in order to output the desired document of the user; see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33), and

wherein said method further includes a control method for said printer by which said printer prints the print data output from said host computer (i.e. the image and order files (9 and 10) are both used to reflect what the user desires to have printed by the printer (2) and this information has been outputted by the order receiving apparatus

(1). Since the personal computer (4) sends information to the order receiving apparatus to be printed, this is considered as the host computer that outputted print data to the printer (2); see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

However, Ohtsuka '526 fails to teach wherein said external operating apparatus comprising the steps of: reading out image data from a detachable storage medium; operating a button to instruct said host computer to preview the image data read out by said reading means; transmitting the image data read out in said reading step, to said host computer in response to said button being operated; generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer; wherein said host computer comprising the steps of: receiving the image data read out in said reading step and then transmitted in said transmitting step; receiving the interruption event generated in said controlling step from said external operating apparatus and effecting a preview display in which the print setting is reflected in the image data received in said image data receiving step.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses wherein said external operating apparatus comprises:

reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor).

However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

operating a button to instruct said host computer to preview the image data read out by said reading means (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmitting the image data read out in said reading step, to said host computer in response to said button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

wherein said host computer comprising the steps of: receiving the image data read out in said reading step and then transmitted in said transmitting step (i.e. in the system, the host computer is able to receive image data from the digital camera once the camera reads image data from the memory card (8) and transmits this information to the computer through the communication I/F (213); see col. 6, ln 9-13);

receiving the interruption event generated in said controlling step from said external operating apparatus (i.e. in the system, the camera can send an interruption event regarding the updating of the image in the camera. If the image in the camera is changed, this is reflected in the PC's monitor; see col. 7, ln 60-col. 8, ln 20) and effecting a preview display in which the print setting is reflected in the image data received in said image data receiving step (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images. Also, the system is able to reflect the update of the image that may have changed due to movement of the camera or a different image being taken with different scene information. This is shown in the camera and the updated screen in the computer; see fig. 12; col. 7, ln 42 - col. 9, line 41).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wherein said external operating apparatus comprising the steps of: reading out image data from a detachable storage medium; operating a button to instruct said host computer to preview the image data read out by said reading means; transmitting the image data read out in said reading step, to said host computer in response to said button being operated, wherein said host computer comprising the steps of: receiving the image data read out in said reading step and then transmitted in said transmitting step; receiving the interruption event generated in said controlling step from said external operating apparatus and effecting a preview display in which the print setting is reflected in the image data

received in said image data receiving step, incorporated in the device of Ohtsuka '526, in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of

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displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 14: Ohtsuka '526 discloses a method of controlling an external operating apparatus connectable to a print system constructed by a host computer including at least a receiving unit for receiving image data (i.e. in the system of Ohtsuka, both computers receive image data; see col. 7, ln 8-15 and col. 10, ln 22-28), a print control

unit which generates print data corresponding to the print setting (i.e. in Ohtsuka, the order information (7) is used to generate an order file on a computer and the order file can be transmitted to the order receiving computer. The order information developed at the camera is considered as the print setting instructions; see col. 6, ln 3-64) and outputs the generated print data to a printer (i.e. the printer in the system is able to produce a print job reflecting the order information sent from the camera; see col. 8, ln 62 - col. 9, ln 2), and said printer, said method comprising the steps of:

displaying a print setting screen on a display unit (i.e. a monitor on the digital camera is used to show settings regarding the printing that the user can set; see col. 6, ln 3-64);

receiving by an operation panel the print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56);

generating the interruption event in accordance with the print setting instruction being received in said receiving step (i.e. the digital camera is used to receive a printer

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instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) to cause it to reflect a print setting corresponding to the print setting instruction received in said receiving step in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56).

However, Ohtsuka '526 fails to teach a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit, reading out image data from a detachable storage medium; operating a button to instruct said host computer to preview the image data read out in said reading

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step; transmitting the image data read out in said reading step, to said host computer in response to said button being operated; generating the interruption event in accordance with the instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images; see fig. 12; col. 9, lines 12-41),

reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor). However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

operating a button to instruct said host computer to preview the image data read out in said reading step (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmitting the image data read out in said reading step, to said host computer in response to said button being operated (i.e. in the system, the digital camera (1) can be connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the PC (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit, reading out image data from a detachable storage medium, operating a button to instruct said host computer to preview the image data read out in said reading step and transmitting the image data read out in said reading step, to said host computer in response to said button being operated in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach generating the interruption event in accordance with the instruction being received in said receiving step after the image data read out in said reading step is transmitted to

said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses generating the interruption event in accordance with the instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated with the function keys. With the Ohtsuka reference

modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of generating the interruption event in accordance with the instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 15: Ohtsuka '526 discloses a method of controlling an information processing apparatus which can communicate with an external operating apparatus including a display unit which displays a print setting screen (i.e. the digital camera used contains a monitor on the camera that displays setting value choices regarding print settings; see col. 6, lines 1-56); an operation panel which receives a print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of

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setting the above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), a controller in accordance with said operation panel receiving the print setting instruction (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) so to cause it to reflect a print setting corresponding to the print setting instruction received by said operation panel in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or

setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), said method comprising the steps of:

receiving the image data (i.e. in the system both the personal computer (4) and the order receiving apparatus (1) can be considered as a host computer. The personal computer (4) is able to receive image data from the digital camera. The input from the digital camera relates to information that was stored as a predetermined value before the information was input into the personal computer (4); see fig. 1; col. 7, lines 1-66), and

generating print data corresponding to the print setting (i.e. the order information instructs the printer to generate print data corresponding to the order information (12) specified in the order file (10). Although a print control unit is not specified, the order receiving apparatus (1) is clearly the printer control unit since the instructions for the printer has to be recognized and processed by the order receiving apparatus (1) and the printer is controlled by the apparatus (1) in order to output the desired document of the user; see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33), and

and outputting the generated print data to said printer (i.e. the image and order files (9 and 10) are both used to reflect what the user desires to have printed by the printer (2) and this information has been outputted by the order receiving apparatus (1). Since the personal computer (4) sends information to the order receiving apparatus to be printed, this is considered as the host computer that outputted print data to the

printer (2); see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

However, Ohtsuka '526 fails to teach wherein said external operating apparatus including reading means for reading out image data from a detachable storage medium; a preview button operative to instruct said host computer to preview the image data read out by said reading means; transmitting means for transmitting the image data read out by said reading means, to said information processing apparatus in response to said preview button being operated; a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said information processing apparatus by said transmission means so that the generated interruption event is transmitted to said information processing apparatus; a receiving unit which receives transmitted from said external operating apparatus, effecting a preview display in which the print setting is reflected in the image data received by said receiving unit.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses wherein said external operating apparatus including reading means for reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor). However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

a preview button operative to instruct said host computer to preview the image data read out by said reading means (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmission means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

a receiving unit which receives the interruption event transmitted from said external operating apparatus (i.e. in the system, the camera can send an interruption event regarding the update of the image in the camera. If the image in the camera is changed, this is reflected in the PC's monitor and the update of the image sent to computer is considered an interruption event; see col. 7, ln 60-col. 8, ln 20) and

effecting a preview display in which a print setting is reflected in the image data received by said receiving unit (i.e. in the PC, the monitor is updated in the change of

the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images. Also, the system is able to reflect the update of the image that may have changed due to movement of the camera or a different image being taken with different scene information. This is shown in the camera and the updated screen in the computer; see fig. 12; col. 7, ln 42 - col. 9, line 41).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wherein reading means for reading out image data from a detachable storage medium; a preview button operative to instruct said host computer to preview the image data read out by said reading means; transmitting means for transmitting the image data read out by said reading means, to said information processing apparatus in response to said preview button being operated, a receiving unit which receives transmitted from said external operating apparatus, effecting a preview display in which the print setting is reflected in the image data received by said receiving unit, incorporated in the device of Ohtsuka '526, in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said information processing apparatus by said transmission

means so that the generated interruption event is transmitted to said information processing apparatus.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said information processing apparatus by said transmission means so that the generated interruption event is transmitted to said information processing apparatus (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated

with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said information processing apparatus by said transmission means so that the generated interruption event is transmitted to said information processing apparatus, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 16: Ohtsuka '526 discloses a program stored on a computer-readable recording medium, for causing a computer to execute a method of controlling a print system comprising an external operating apparatus, a host computer which communicates with said external operating apparatus, and a printer which communicates with said host computer,

wherein said method includes a control method for said external operating apparatus and comprises, the steps of:

displaying a print setting screen on a display unit (i.e. the digital camera used contains a monitor on the camera that displays setting value choices regarding print settings; see col. 6, lines 1-56);

receiving by an operation panel a print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56),

in accordance with the print setting instruction being received in said receiving step (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) so to cause it to reflect a print setting corresponding to the print setting instruction received in said receiving step in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an

instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), and

wherein said method further includes a control method for said host computer comprising the steps of:

receiving the image data (i.e. in the system both the personal computer (4) and the order receiving apparatus (1) can be considered as a host computer. The personal computer (4) is able to receive image data from the digital camera. The input from the digital camera relates to information that was stored as a predetermined value before the information was input into the personal computer (4); see fig. 1; col. 7, lines 1-66), and

generating print data corresponding to the print setting (i.e. the order information instructs the printer to generate print data corresponding to the order information (12) specified in the order file (10). Although a print control unit is not specified, the order receiving apparatus (1) is clearly the printer control unit since the instructions for the printer has to be recognized and processed by the order receiving apparatus (1) and the printer is controlled by the apparatus (1) in order to output the desired document of the

user; see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33), and

wherein said method further includes a control method for said printer by which said printer prints the print data output from said host computer (i.e. the image and order files (9 and 10) are both used to reflect what the user desires to have printed by the printer (2) and this information has been outputted by the order receiving apparatus (1). Since the personal computer (4) sends information to the order receiving apparatus to be printed, this is considered as the host computer that outputted print data to the printer (2); see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

However, Ohtsuka '526 fails to teach wherein said external operating apparatus comprising the steps of: reading out image data from a detachable storage medium; operating a button to instruct said host computer to preview the image data read out by said reading means; transmitting the image data read out in said reading step, to said host computer in response to said button being operated; generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer; wherein said host computer comprising the steps of: receiving the image data read out in said reading step and then transmitted in said transmitting step; receiving the interruption event generated in said controlling step from said external operating

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apparatus and effecting a preview display in which the print setting is reflected in the image data received in said image data receiving step.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses wherein said external operating apparatus comprises:

reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor). However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

operating a button to instruct said host computer to preview the image data read out by said reading means (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmitting the image data read out in said reading step, to said host computer in response to said button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button,

the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

wherein said host computer comprising the steps of: receiving the image data read out in said reading step and then transmitted in said transmitting step (i.e. in the system, the host computer is able to receive image data from the digital camera once the camera reads image data from the memory card (8) and transmits this information to the computer through the communication I/F (213); see col. 6, ln 9-13);

receiving the interruption event generated in said controlling step from said external operating apparatus (i.e. in the system, the camera can send an interruption event regarding the updating of the image in the camera. If the image in the camera is changed, this is reflected in the PC's monitor; see col. 7, ln 60-col. 8, ln 20) and effecting a preview display in which the print setting is reflected in the image data received in said image data receiving step (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images. Also, the system is able to reflect the update of the image that may have changed due to movement of the camera or a different image being taken with different scene information. This is shown in the camera and the updated screen in the computer; see fig. 12; col. 7, ln 42 - col. 9, line 41).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wherein said external operating apparatus comprising the steps of: reading out image data from a detachable

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storage medium; operating a button to instruct said host computer to preview the image data read out by said reading means; transmitting the image data read out in said reading step, to said host computer in response to said button being operated, wherein said host computer comprising the steps of: receiving the image data read out in said reading step and then transmitted in said transmitting step; receiving the interruption event generated in said controlling step from said external operating apparatus and effecting a preview display in which the print setting is reflected in the image data received in said image data receiving step, incorporated in the device of Ohtsuka '526, in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field

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of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of generating an interruption event in accordance with said instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmission step so that the generated interruption event is transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being

taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 17: Ohtsuka '526 discloses a program stored on a computer-readable recording medium, for causing a computer to execute a method of controlling an external operating apparatus connectable to a print system constructed by a host computer including at least a receiving unit for receiving image (i.e. in the system of Ohtsuka, both computers receive image data; see col. 7, ln 8-15 and col. 10, ln 22-28), a print control unit which generates print data corresponding to the print setting (i.e. in Ohtsuka, the order information (7) is used to generate an order file on a computer and the order file can be transmitted to the order receiving computer. The order information developed at the camera is considered as the print setting instructions; see col. 6, ln 3-64) and outputs the generated print data to a printer (i.e. the printer in the system is able to produce a print job reflecting the order information sent from the camera; see col. 8, ln 62 - col. 9, ln 2), and said printer, said method comprising the steps of:

displaying a print setting screen on a display unit (i.e. a monitor on the digital camera is used to show settings regarding the printing that the user can set; see col. 6, ln 3-64);

receiving by an operation panel the print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set order information in regards to

the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56);

generating the interruption event in accordance with the print setting instruction being received in said receiving step (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) to cause it to reflect a print setting corresponding to the print setting instruction received in said receiving step in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired.

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Once the key is pressed to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56).

However, Ohtsuka '526 fails to teach a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit, reading out image data from a detachable storage medium; transmitting the image data read out in said reading step, to said host computer in response to said button being operated; generating the interruption event in accordance with the instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images; see fig. 12; col. 9, lines 12-41),

reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor).

However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

transmitting the image data read out in said reading step, to said host computer in response to said button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera. When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit, reading out image data from a detachable storage medium and transmitting the image data read out in said reading step, to said host computer in response to said button being operated in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach generating the interruption event in accordance with the instruction being received

in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses generating the interruption event in accordance with the instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the

interruption event associated with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of generating the interruption event in accordance with the instruction being received in said receiving step after the image data read out in said reading step is transmitted to said host computer in said transmitting step so that the generated interruption event is transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Re claim 18: Ohtsuka '526 discloses A program stored on a computer-readable medium, for causing a computer to execute a method of controlling an information processing apparatus which can communicate with an external operating apparatus including a display unit which displays a print setting screen (i.e. the digital camera used contains a monitor on the camera that displays setting value choices regarding print settings; see col. 6, lines 1-56); an operation panel which receives a print setting instruction provided by a user based on the print setting screen displayed on said display unit (i.e. in the system, the digital camera has an operational panel, which allows the user to see the picture that has been photographed and also allows the user to set

order information in regards to the necessity of printing and the quantity of prints desired by the user. The quantity of prints can be considered as the print setting instruction. With the function of setting the above parameters on the digital camera, it is clear that an input is received on the operational panel on the camera to signal a necessity of printing or quantity of printing to the digital camera. The digital camera is considered as an external operating apparatus; see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), a controller in accordance with said operation panel receiving the print setting instruction (i.e. the digital camera is used to receive a printer instruction on the operation panel and this interruption event causes flags set for print settings and print necessity to be set; see col. 6, ln 3-64) so to cause it to reflect a print setting corresponding to the print setting instruction received by said operation panel in the image data (i.e. each time the digital camera (3) is used to perform a certain function, a signal is sent in the CPU of the digital camera system that corresponds to a certain function. This is clear in any computational device, that an interrupt, or signal of some kind, is generated that corresponds with a certain function in the system of a computational device. In the current example of the digital camera, when the function of setting a print necessity is made, a print flag is set to 1 each time a print necessity is made in regards to a picture desired to be printed. This is an example of generating an interruption event when an instruction is made at the digital camera. In regards to the instruction of the quantity of prints that is analogous to the print setting instruction, when the flag of the necessity of printing is set to 1, setting values relating the quantity or size of prints, are selected by a button on the digital camera each time this setting is desired. Once the key is pressed

to select a certain setting, this generates an interrupt in the system of the camera signifying that the user has chosen a certain value or setting each time the value or setting is made at the digital camera (3); see fig. 1; col. 1, lines 18-26 and col. 6, lines 1-56), and a printer, said apparatus comprising:

a receiving unit which receives the image data (i.e. in the system both the personal computer (4) and the order receiving apparatus (1) can be considered as a host computer. The personal computer (4) is able to receive image data from the digital camera. The input from the digital camera relates to information that was stored as a predetermined value before the information was input into the personal computer (4); see fig. 1; col. 7, lines 1-66), and

a print control unit which generates print data corresponding to the print setting (i.e. the order information instructs the printer to generate print data corresponding to the order information (12) specified in the order file (10). Although a print control unit is not specified, the order receiving apparatus (1) is clearly the printer control unit since the instructions for the printer has to be recognized and processed by the order receiving apparatus (1) and the printer is controlled by the apparatus (1) in order to output the desired document of the user; see fig. 1; col. 7, lines 1-66, col. 8, lines 35-66, col. 9, lines 1, 2 and col. 10, lines 17-33), and

and outputting the generated print data to said printer (i.e. the image and order files (9 and 10) are both used to reflect what the user desires to have printed by the printer (2) and this information has been outputted by the order receiving apparatus (1). Since the personal computer (4) sends information to the order receiving apparatus to

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be printed, this is considered as the host computer that outputted print data to the printer (2); see fig. 1; col. 7, lines 1-66, col. 8, lines 35- 66, col. 9, lines 1, 2 and col. 10, lines 17-33).

However, Ohtsuka '526 fails to teach wherein said external operating apparatus including reading means for reading out image data from a detachable storage medium; a preview button operative to instruct said host computer to preview the image data read out by said reading means; transmitting means for transmitting the image data read out by said reading means, to said information processing apparatus in response to said preview button being operated; a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said information processing apparatus by said transmission means so that the generated interruption event is transmitted to said information processing apparatus; a receiving unit which receives transmitted from said external operating apparatus, a display control unit which effects a preview display in which the print setting is reflected in the image data received by said receiving unit.

However, this is well known in the art as evidenced by Niikawa '500. Niikawa '500 discloses wherein said external operating apparatus including reading means for reading out image data from a detachable storage medium (i.e. like the system of Ohtsuka, the reference of Niikawa comprises a camera communicating with a computer and the computer is connected to a printing device for printing (same field of endeavor).

However, the card I/F (212) is used to read image data from the memory card (8), which is considered as a detachable storage medium; see col. 6, ln 9-13);

a preview button operative to instruct said host computer to preview the image data read out by said reading means (i.e. when the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

transmission means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated (i.e. in the system, the digital camera (1) can connected to the PC (1000) and it is able to transmit image data read out from its memory and an interruption event notifying the PC (1000) of the connection to the PC to the digital camera. The communication I/F (213) is used to transmit image data read out to the computer connected to the camera.

When the user presses the shutter button (9), this action creates a preview of the image on the computer screen of the Pc (1000). Since the shutter button operates in a manner analogous to the preview button, the above claim feature is performed; see col. 6, line 46 – col. 8, line 8 and col. 10, ln 1-11);

a receiving unit which receives the interruption event transmitted from said external operating apparatus (i.e. in the system, the camera can send an interruption event regarding the update of the image in the camera. If the image in the camera is changed, this is reflected in the PC's monitor and the update of the image sent to computer is considered an interruption event; see col. 7, ln 60-col. 8, ln 20) and

a display control unit which effects a preview display in which a print setting is reflected in the image data received by said receiving unit (i.e. in the PC, the monitor is updated in the change of the display when the color balance is adjusted in the system. The monitor of the PC being updated occurs in order to confirm the setting changes on the images. Also, the system is able to reflect the update of the image that may have changed due to movement of the camera or a different image being taken with different scene information. This is shown in the camera and the updated screen in the computer; see fig. 12; col. 7, ln 42 - col. 9, line 41).

Therefore, in view of Niikawa '500, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wherein said external operating apparatus comprises: reading means for reading out image data from a detachable storage medium, transmission means for transmitting the image data read out by said reading means, to said host computer in response to said preview button being operated, wherein said host computer comprises: a receiving unit which receives the image data read out by said reading means and then transmitted by said transmission means from said storage medium, a display control unit which receives the interruption event generated by said controller from said external operating apparatus and effects a preview display in which the print setting is reflected in the image data received by said receiving unit, incorporated in the device of Ohtsuka '526, in order to have a digital camera contain a communication interface to communicate with a PC (as stated in Niikawa '500 col. 6, lines 9-13).

However, the references of Ohtsuka '526 and Niikawa '500 fail to specifically teach a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer.

However, this is well known in the art as evidenced by Niikawa '618. Niikawa '618 discloses a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer (i.e. like the above applied references, the Niikawa '618 reference comprises a camera to send instructions and events to a computer and the computer is connected to a printer for printing (same field of endeavor). However, unlike Niikawa '500, Niikawa '618 discloses specifically sending an instruction from the camera operation panel to the computer after image data has been sent to the computer. As shown in figure 15, function keys can be registered to perform the features of displaying image data in a PC or execute an application in the personal computer. The user of the camera can set a function key to transmit image data to a PC and once the button is pressed, the key is able to perform this feature. Then the user can set another function key to perform a feature of displaying this data on the PC monitor. The system can also assign a function key for executing an application on the PC and the application on the PC can be similar to the color adjusting program performed in the Niikawa '500 reference. The above is an

example of sending an instruction to the PC after the image data is sent to a computer. It is also understood that the controller of the camera is used to generate the interruption event associated with the function keys. With the Ohtsuka reference modified by the references of Niikawa '500 and '618, the above claim limitation is performed; see fig. 15; col. 2-67).

Therefore, in view of Niikawa '618, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a controller which generates an interruption event in accordance with said operation panel receiving the instruction after the image data read out by said reading means is transmitted to said host computer by said transmission means so that the generated interruption event is transmitted to said host computer, incorporated in the device of Ohtsuka '526, as modified by the features of Niikawa '500, in order to have the live-view image being taken by the camera to be displayed on the monitor of the personal computer (as stated in Niikawa '618 col. 1, ln 19-32).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
8. Okisu '827 (US Pub No 2002/0140827) discloses a system with a camera connected to a computer and printer for printing. The camera is used perform adjustments to images and the computer can be used to show the images on the screen.

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9. Niikawa '075 (USP 6947075) discloses a system similar to Niikawa '500 and '618 in which the camera's display can be seen real-time on the computer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAD DICKERSON whose telephone number is (571)270-1351. The examiner can normally be reached on Mon. thru Thur. 9:00-6:30 Fri. 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571)-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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